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(71) Applicant  
Pfizer Inc. (USA-New York),  
235 East 42nd Street, New York, N. Y. 10017, United States  
of America

(72) Inventors  
William Bohmer,  
Ralph James Devito,  
Louis Simon Hoffman,  
Charles B. Sanders,  
Richard Dupuy Watkins

(74) Agent and/or Address for Service  
P. C. C. Graham, Pfizer Limited, Ramsgate Road,  
Sandwich, Kent

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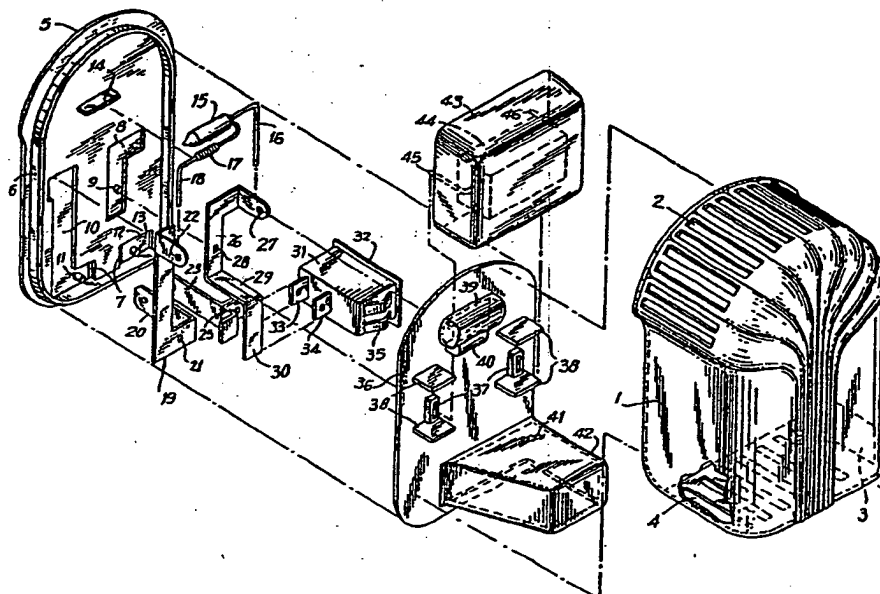
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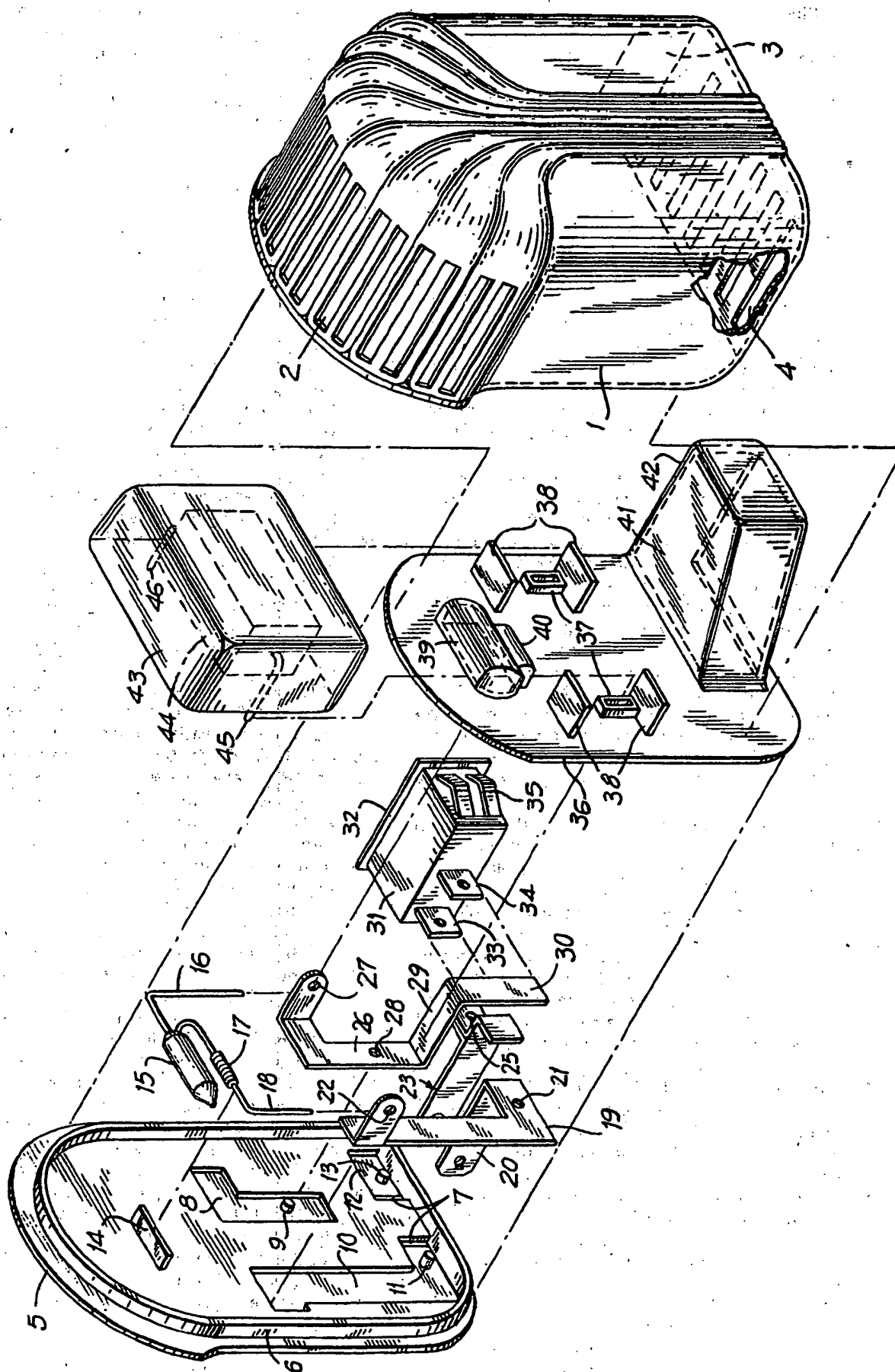
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## (54) Fragrance generator

(57) An odorizer comprises an electrical heating element 44 fixedly enclosed in porous material 43 impregnated with volatile odorous substance. The heating element may be a ceramic coated resistor or a light bulb (not shown), and the porous material may be plaster of Paris. The terminals 45, 46 of the heating element may constitute releasable connections to the current supply means located behind bulkhead 36, so that, on removing the front cover 1, the assembly of heating element 44 and porous material block 43 may be replaced when exhausted.



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## SPECIFICATION

## Fragrance generator

5 The present invention is concerned with the field of room odorization. In particular, it deals with a disposable device, which is electrically heated and which volatilizes perfume from porous material.

In the past, such devices have evaporated liquid perfume from reservoirs using the heat from light bulbs, as in U.S. 1,803,334 and have also liquified wax impregnated with perfume, as in U.S. 2,532,800. U.S. 2,942,090 teaches a housing containing a light bulb and having deodorant tablets which are newly saturated with liquid perfume each time the device is to be used. U.S. 3,080,624 employs a reservoir filled with perfume and topped with a wick to bring the perfume in contact with the hot light bulb. The disadvantage of having liquid perfume in contact with hot electric light bulbs is obvious.

U.S. 3,923,458 makes use of a refractory cake to carry perfume oil and an electric heating element with a pilot light to volatilize the perfume.

25 The present invention, for the first time, presents a disposable unitary odorizer which overcomes the numerous shortcomings of the devices heretofore employed to odorize rooms.

The present invention is a disposable odorizer comprising an electrical heating element fixedly enclosed in porous material impregnated with volatile odorous substance. The odorizer wherein the heating element is a ceramic coated resistor is preferred as is the odorizer wherein the heating element is a light bulb.

35 The odorizer wherein the porous material is plaster of Paris is preferred as is the odorizer wherein the porous material is molded around the heating element. The odorizer is also preferred with a housing with means to direct the odorous substance as it volatilizes.

40 The odorizer which further comprises indicator means for verifying activation of the heating element is preferred and the odorizer wherein the indicator means is a neon bulb wired so as to remain lighted whenever the heating element is activated is especially preferred as is the odorizer wherein the heating element is energized by switching means.

50 A disposable odorizer comprising a ceramic coated resistor embedded in plaster of Paris impregnated with up to about 10 weight percent volatile perfume is an especially preferred embodiment of the present invention.

55 The Figure shows an exploded isometric perspective view of the total assembly of the odorizer including the housing and all internal parts.

The Figure shows a side elevational view of the housing 1 of the odorizer which is preferably made of a hard translucent plastic such as polypropylene. It has a series of apertures or slots 2 along the upper portion to allow the escape of the volatilized odorous substance. It also has an opening or slot 3 to receive a switch. Several ventilator openings 4 are located on the underside of housing 1 to allow

for the entrance of air from the outside of the unit so that it can pass over the scented block and out through the odor slots 2 in the housing. Movement of air is increased by the convective action resulting from the heating of perfumed block 44.

70 The Figure also shows a side elevational view of the backing plate 5 with a rib means 6 to which housing 1 is permanently affixed. Openings 7 provide a means for metal contacts 20 and 23 to project through backing plate 5 to make electrical contact with a duplex wall outlet. Formed recesses 8 and 10 receive contacts 20 and 23 and formed pins 9, 11 and 13 serve as a fastening means for contacts 20 and 23 by being heat distorted after passing through holes 21, 25 and 28 in the contacts. Formed projection 14 serves as a support for neon lamp 15 which is electrically connected to the contacts by means of wire 16 and through resistor 17 and wire 18, such wires passing through holes 22 and 27. Electrical current passes through contact 23 to switch 31, which is affixed to the contact 23 by means of the switch contact 33. Switch 31 is wired in series with contact 30 through switch contact 34, so that when switch 31 is closed current flows through neon lamp 15 and electrical leads 45 and 46 through resistive element 44 and fragrance block 43. Neon lamp 15 wired in parallel with resistive element 44 is on when current flows through resistive element 44. Flange 32 on switch 31 finishes the opening 3 on the housing 1 after assembly.

95 The Figure further shows a side elevational view of the bulkhead 36 which separates fragrance block 43 from the electrical connections. Openings 37 are slots through which contacts 19 and 26 pass and are electrically connected to the resistive element 44 by means of leads 45 and 46 through holes 22 and 27. Projections 38 provide a means by which fragrance impregnated plaster can be poured and held in place when hardened. Projections 38 also provide a means for prevention of contact with electrical contacts 45 and 46 by objects inserted through openings 2 and 4 in housing 1. Projection 39 protects lamp 15. Projection 40 protects resistor 17 and projection 41 protects switch 31. Opening 42 for switch 31 is 31. Openings 42 for switch 31 is aligned with aligned with openings 3 in housing 1.

100 In manufacturing the odorizer of the present invention, an electrical heating element, preferably a ceramic coated resistor, will be embedded in porous material in liquid state. The porous material will be molded into a desired shaped block and the heating element will be positioned so that its leads protrude from the block, preferably from opposite sides or from the top and bottom of the block. It is preferable to protect the electrical connections from the odorous fumes and this may be done by sealing the leads into the housing of the unit. A bulkhead which separates the electronics of the fragrance generator from the odorous fumes is a preferred means of providing this protection. In the case where a light bulb is employed as the heat source, the bulb will be immersed up to the threaded portion in liquid plaster and the plaster will then be allowed to harden. A bulb receptacle

will be provided to receive the bulb and it will be wired into the system in place of the resistor.

The preferred porous material is plaster of Paris which can optionally contain other components to

5 strengthen the material and prevent mechanical and thermal damage. The liquid plaster can be pre-molded into any desired shape to provide a fragrance block. It also can be molded, if desired, by pouring plaster through holes provided in the bulkhead when the bulkhead is placed in the mold. Yet another possible means of forming the fragrance block is to pour the plaster into the mold and then lower the bulkhead into the hardening plaster to the desired depth.

15 The odorous substances to be volatilized will generally be mixed into the plaster while it is still in liquid form and will be entrapped in the porous block once the plaster has set up. Alternatively, the odorous substances can be applied to the hardened plaster block after it has been molded.

The odorous substances used in the present invention will generally be of the nature of a perfume or perfume oil designed to impart a pleasant fragrance to a room such as a bathroom or nursery.

25 It is also contemplated that a substance such as an insect repellant liquid or even an insecticide can be used as the substance to be volatilized. In such cases the odorizer could then be used to repel such insects as flies and mosquitoes from rooms and to repel and/or kill such insects as moths in closets. In all cases, no substance will be employed which is flammable or which will provide any hazard to humans or to pets.

### 35 CLAIMS

1. A disposable odorizer comprising an electrical heating element fixedly enclosed in porous material impregnated with volatile odorous substance.

40 2. The odorizer of Claim 1 wherein said heating element is a ceramic coated resistor.

3. The odorizer of Claim 1 wherein said heating element is a light bulb.

45 4. The odorizer as claimed in any preceding claim wherein said porous material is plaster of Paris.

5. The odorizer as claimed in any preceding claim wherein said porous material is molded around said heating element.

50 6. The odorizer as claimed in any preceding claim also comprising a housing with means to direct said odorous substance as it volatilizes.

7. The odorizer as claimed in any preceding claim which further comprises a bulkhead which isolates said impregnated porous material.

8. The odorizer as claimed in any preceding claim which further comprises indicator means for verifying activation of said heating element.

9. The odorizer as claimed in Claim 8 wherein said indicator means is a neon bulb wired so as to remain lighted whenever said heating element is activated.

10. The odorizer as claimed in any preceding claim wherein said heating element is energized by switching means.

11. A disposable odorizer comprising a ceramic coated resistor embedded in plaster of Paris impregnated with up to about 10 weight percent volatile perfume.

70 12. A disposable odorizer substantially as herein before described with particular reference to the accompanying drawings.

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